Geochemical and geological surveys on the MOSQUITO group of claims situated $4\frac{1}{2}$ miles south of Mt. Milligan, Omineca M.D., British Columbia, N.T.S. 93 NW, Longitude 124°03'; Latitude 55°07' and owned by and on behalf of Pechiney Development Ltd.

Field work between the 1st and 15th of

September 1972





Report by

B. Berthault, Geologist May 1, 1973

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I <u>CLAIMS - LOCATION - ACCESS</u>

The MOSQUITO group of claims is composed of a block of ten claims, which were staked on the 4th of August 1972 and recorded on the 24th of August 1972. ۰.

The claims are recorded as follows:

<u>Claim Nam</u>	<u>1e</u>	Record No.
MOCONTRO	4	115 400
MOSQUITO	1	115 409
MOSQUITO	2	115 410
MOSQUITO	3	115 411
MOSQUITO	4	115 412
MOSQUITO	5	115 413
MOSQUITO	6	115 414
MOSQUITO	7	115 415
MOSQUITO	8	115 416
MOSQUITO	9	115 417
MOSQUITO	10	115 418

The claims are located $4\frac{1}{2}$ miles south of Mt. Milligan and some 50 miles north of the town of Fort St. James; the approximate coordinates of the claims are X = $124^{0}03'$; Y = $55^{0}07'$ on N.T.S. map 93 NW (map in text).

Access to the claims is possible by helicopter only, from the base of Fort St. James.



The relief is rough as half of the claims are located on a steep slope facing southward and covered by fallen trees. The remaining claims cover a gently northeastward dipping plateau limited by hills to the north.

Outcrops occur well in the north part of the property. There are less outcrops on the slope which is covered by talus formations.

II <u>SURVEYS</u>

During the first half of the month of September 1972 a prospecting campaign, geological mapping and geochemical sampling were carried out on the claims. Mike Caron, a senior student in geology at U.B.C., was in charge of the work in the field.

One hundred and fifteen (115) soil samples were taken from the top of the B horizon and analysed by atomic absorption after extraction by "hot aqua regia" for copper, zinc, molybdenum and manganese by Bondar Clegg Laboratories, 1500 Pemberton Ave., North Vancouver, B.C.

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III GENERAL PETROGRAPHY OF THE CLAIM OUTCROPS (Map # 1 in pocket)

The main facies encountered on the claims is a porphyritic hornblende andesite, the hornblende phenocrysts of which are up to 4 mm in length. Plagioclase phenocrysts are not well defined. The rock is massive, dark in colour and its matrix seems to be aphanitic or very finely crystallized. Little epidotization and chloritization were observed in this facies. Pyrite is widely disseminated, but its abundance is nearly always below 2%.

This facies can change in some places into a generally medium grained andesitic tuff. In one thin section of the andesite it appears that amphiboles, mainly green hornblende, are strongly altered and often replace broken diopside crystals. Feldspar phenocrysts are also most of the time strongly altered and it is not possible to identify them. Calcite, epidote and damourite are the main products of alteration. Hornblende sometimes seems to replace some altered feldspar.

Agglomerate occurs in the upper part of the slope and in two other locations of the claims; in all cases they are closely related to tuffs.

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Three outcrops of feldspar porphyry do not show the relations of this facies and the others. We do not know whether or not the porphyry truly intrudes the andesite or whether it is a sill-like body contemporaneous with the host rocks. In thin section this porphyry facies appears to be a quartz feldspar honrblende porphyry with feldspar phenocrysts strongly zoned and highly altered. The elongated crystals of green hornblende are fresh, sometimes rimmed by light chlorite or by sericite or muscovite. Large quartz crystals are rare; quartz is present especially in the matrix which is fine grained. This porphyry contains a fair amount of epidote related to or in immediate vicinity of fractures, some of which are filled with pyrite and/or chalcopyrite.

IV <u>GEOCHEMICAL RESULTS</u> (Map # 2 in pocket)

Geochemical analysis concerned Mn, Zn, Mo and Cu. The values of manganese are generally low and must not interfere with the results of copper, zinc and molybdenum (with the exception of 2 readings above 3500 ppm). Zinc values are generally low, below 125 ppm and do not delineate any anomaly. Molybdenum values are fairly low; the regional background stays around 1 and 2 ppm. Values above 8 ppm may be considered as small anomalous readings, but do not delineate anomalous areas.

Copper values vary between 20 and 1500 ppm. The background may be located around 70 ppm and the values above 200 ppm may be considered anomalous. The readings occurring between 200 and 1500 ppm delineate 2 areas located on the upper part of the slope. It is not possible yet to explain the cause of these anomalies and to establish whether or not they are connected with a N45W tectonic element which seems to cross the west corner of the property.



Respectfully submitted,

B. Berthault, Geologist Buthank

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APPENDIX I

Personnel Certificates

BERTHAULT, Bernard: Geological Engineer, University of Nancy, France; Graduate of E.N.S.G., France. Engaged in mineral exploration since 1963 while employed by the French Atomic Agency, Mokta (Canada) Ltd. and Pechiney Development Ltd.

Address: 802 - 1250 Burnaby St., Vancouver

- CARON, Michael E: Four years of science, U.B.C. Age 24. Previous experience includes - three seasons with Pechiney Development Ltd. and one season with Texas Gulf CO.
- ADAM, Ian: 2nd year student in geology, U.B.C. Worked for one summer with Pechiney Development Ltd. as soil sampler

APPENDIX II

Cost Breakdown - MOSQUITO Group of Claims

Geochemical Survey

1.	115 samples analysed for Cu, Mo, Zn, Mn by Bondar-Clegg & Co. Ltd. @ \$3.20 per sample	\$ 368
2.	Geochemical sampler - salary 10 days @ \$15.00/day	150
3.	Geological mapping 10 days © \$23.50/day	235
4.	Study of thin sections - report drafting, typing	300
	T o t a l	\$ 1,043

\$1,043 to apply to the MOSQUITO group of claims for one years assessment.



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B. Berthault

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PECHINEY DEVELOPMENT LTD Department of Mines and Petroleum Resources ASSESSMENT REPORT NO 4274 MAP #1 CLAIMS MOSQUITO 32 35 7573 185 1 GEOCHEM SAMPLES LOCATION 73 05 41 41 32 36 RESULTS AND 69 26 31 210 2 67 To accompany geochemical and geolo-gical survey by B. Berthault, geolo-gist, on the MOSQUITO group of claims, 4¹/₂ miles south of Mt. Milligan, Omineca Mining Division, dated May 1, 145 2 177 28 1973 215 52 161 37 63 300 3 Berthank Claim post Cu ppm | Zn ppm 12 70 250 2 Mn ppm | Mo ppm OFESSIO 08.9VING 522 OF Sample number J. HAILLOT BRITISH COLUMBI GINE SCALE : 1"= 500'



PECHINEY DEVELOPMENT LTD Department of Mines and Petroleum Resources ASSESSMENT REPORT NO 4274 MAP#2 CLAIMS MOSQUITO GEOLOGY OUTCROPS MAP To accomapny geochemical and geolo-gical survey by B. Berthault, geolo-gist, on the MOSQUITO group of claims 4¹/₂ miles south of Mt. Milligan, Omineca Mining Division, dated May 1, 1973 Buthan b [:::] Porphyritic Hornblende Andesite ::: Andesitic Tuff Aggiomerate Latite (Trachy Andesite) NOF Feldspar Porphyry -33. A. L. J. HAILLOT Traverse Line ------BRITISH COLUMB 30 Joint Claim post SCALE : 1" = 500' Approximate boundery of top of - 1 . talus slope